



CONTENTS OF VOLUME 140

Vol. 140B, No. 1

Appreciation list

1 In Appreciation

Review

L.A. Lambert, H. Perri and T.J. Meehan

11 Evolution of duplications in the transferrin family of proteins

General papers

J. Bembenek, H. Sehadova, N. Ichihara and M. Takeda

27 Day/night fluctuations in melatonin content, arylalkylamine N-acetyltransferase activity and *NAT* mRNA expression in the CNS, peripheral tissues and hemolymph of the cockroach, *Periplaneta americana*

M. Zmojdzian, D. Dziewulska-Szwajkowska and A. Dzugaj

37 Localization of chicken muscle FBPase in cardiomyocyte nuclei

Y. Hitomi, T. Kizaki, S. Watanabe, G. Matsumura, Y. Fujioka, S. Haga, T. Izawa, N. Taniguchi and H. Ohno

45 Seven skeletal muscles rich in slow muscle fibers may function to sustain neutral position in the rodent hindlimb

U.O. de Oliveira, A.S. da Rosa Araújo, A. Belló-Klein, R.S.M. da Silva and L.C. Kucharski

51 Effects of environmental anoxia and different periods of reoxygenation on oxidative balance in gills of the estuarine crab *Chasmagnathus granulata*

M.B. Freitas, C.B.C. Passos, R.B. Vasconcelos and E.C. Pinheiro

59 Effects of short-term fasting on energy reserves of vampire bats (*Desmodus rotundus*)

M. Salem, J. Nath, C.E. Rexroad, J. Killefer and J. Yao

63 Identification and molecular characterization of the rainbow trout calpains (Capn1 and Capn2): their expression in muscle wasting during starvation

S.A. Mohamed, A.S. Fahmy and T.M. Mohamed

73 Carbohydrases in camel (*Camelus dromedarius*) pancreas. Purification and characterization of glucoamylase

C. Barata, J.C. Navarro, I. Varo, M.C. Riva, S. Arun and C. Porte

81 Changes in antioxidant enzyme activities, fatty acid composition and lipid peroxidation in *Daphnia magna* during the aging process

F.J. Castillo-Yáñez, R. Pacheco-Aguilar, F.L. García-Carreño and M.d.I.Á. Navarrete-Del Toro

91 Isolation and characterization of trypsin from pyloric caeca of Monterey sardine *Sardinops sagax caerulea*

J.J. Ramsey, M.-E. Harper, S.J. Humble, E.K. Koomson, J.J. Ram, L. Bevilacqua and K. Hagopian

99 Influence of mitochondrial membrane fatty acid composition on proton leak and H₂O₂ production in liver

S.D. Aird	109	Taxonomic distribution and quantitative analysis of free purine and pyrimidine nucleosides in snake venoms
Y. Bao, Y. Yamano and I. Morishima	127	A novel lebocin-like gene from eri-silkworm, <i>Samia cynthia ricini</i> , that does not encode the antibacterial peptide lebocin
T. Kurokawa, S. Uji and T. Suzuki	133	Identification of pepsinogen gene in the genome of stomachless fish, <i>Takifugu rubripes</i>
A. Krawczenko, L. Ciszak and M. Malicka-Blaszkiewicz	141	Carp liver DNase—isolation, further characterization and interaction with endogenous actin
A. Setini, F. Pierucci, O. Senatori and A. Nicotra	153	Molecular characterization of monoamine oxidase in zebrafish (<i>Danio rerio</i>)
E.B. Sorensen and P.W. Mesner Jr.	163	IgH-2 cells: a reptilian model for apoptotic studies
	I	Instructions to Authors

Vol. 140B, No. 2

General papers

G.-F. Qiu, K. Yamano and T. Unuma	171	Cathepsin C transcripts are differentially expressed in the final stages of oocyte maturation in kuruma prawn <i>Marsupenaeus japonicus</i>
G.T. Seaborn, M.K. Moore and G.H. Balazs	183	Depot fatty acid composition in immature green turtles (<i>Chelonia mydas</i>) residing at two near-shore foraging areas in the Hawaiian Islands
T. Minamoto and I. Shimizu	197	Molecular cloning of cone opsin genes and their expression in the retina of a smelt, Ayu (<i>Plecoglossus altivelis</i> , Teleostei)
M. Nakamura and Y. Tanigawa	207	Noncovalent interaction of MNSFbeta, a ubiquitin-like protein, with histone 2A
L.F. Jackson, S.D. McCormick, S.S. Madsen, P. Swanson and C.V. Sullivan	211	Osmoregulatory effects of hypophysectomy and homologous prolactin replacement in hybrid striped bass
S. Antonopoulou, T. Nomikos, A. Oikonomou, A. Kyriacou, M. Andriotis, E. Fragopoulou and A. Pantazidou	219	Characterization of bioactive glycolipids from <i>Scytonema julianum</i> (cyanobacteria)
M. Guppy, S. Brunner and M. Buchanan	233	Metabolic depression: a response of cancer cells to hypoxia?
R. Rosa, R. Calado, A.M. Andrade, L. Narciso and M.L. Nunes	241	Changes in amino acids and lipids during embryogenesis of European lobster, <i>Homarus gammarus</i> (Crustacea: Decapoda)
M. Johnston, D. Johnston and A. Richardson	251	Digestive capabilities reflect the major food sources in three species of talitrid amphipods

G.L. Skea, D.O. Mountfort and K.D. Clements	259	Gut carbohydrases from the New Zealand marine herbivorous fishes <i>Kyphosus sydneyanus</i> (Kyphosidae), <i>Aploactylus arctidens</i> (Aploactylidae) and <i>Odax pullus</i> (Labridae)
R. Ahmad and A. Hasnain	271	Ontogenetic changes and developmental adjustments in lactate dehydrogenase isozymes of an obligate air-breathing fish <i>Channa punctatus</i> during deprivation of air access
N. Artagaveytia, J.-M. Elalouf, C. de Rouffignac, R. Boivin and A. Cirio	279	Expression of urea transporter (UT-A) mRNA in papilla and pelvic epithelium of kidney in normal and low protein fed sheep
N. Gueguen, L. Lefaucheur, M. Fillaut, A. Vincent and P. Herpin	287	Control of skeletal muscle mitochondria respiration by adenine nucleotides: differential effect of ADP and ATP according to muscle contractile type in pigs
P.M. Chamberlain and H.I.J. Black	299	Fatty acid compositions of Collembola: unusually high proportions of C ₂₀ polyunsaturated fatty acids in a terrestrial invertebrate
V. Karacaoğlan and I. Özer	309	Steady-state kinetic properties of sorbitol dehydrogenase from chicken liver
A.d.P.G. Gomes, S.C. Dias, C. Bloch Jr., F.R. Melo, J.R. Furtado Jr., R.G. Monnerat, M.F. Grossi-de-Sá and O.L. Franco	313	Toxicity to cotton boll weevil <i>Anthonomus grandis</i> of a trypsin inhibitor from chickpea seeds
A.E. Głowacka, E. Podstawka, M.H. Szczeńsna-Antczak, H. Kalinowska and T. Antczak	321	Kinetic and molecular properties of <i>Bacillus subtilis</i> IBTC-3 subtilisin
S. Kirchner, P. Seixas, S. Kaushik and S. Panserat	333	Effects of low protein intake on extra-hepatic gluconeogenic enzyme expression and peripheral glucose phosphorylation in rainbow trout (<i>Oncorhynchus mykiss</i>)
<u>Erratum</u>		
M. Ohkubo, K. Miyagawa, K. Osatomi, K. Hara, Y. Nozaki and T. Ishihara	341	Erratum to "Purification and characterization of myofibril-bound serine protease from lizard fish (<i>Saurida undosquamis</i>) muscle" [Comp. Biochem. Physiol. 137B, 139–150]
I Instructions to Authors		

Vol. 140B, No. 3

General papers

A.R. Thomas, V. Oosthuizen and R.J. Naudé	343	Differential effects of detergents, fatty acids, cations and heating on ostrich skeletal muscle 20S proteasome
M.G. Tingbø, S.O. Kolset, R. Ofstad, G. Enersen and K.O. Hannesson	349	Sulfated glycosaminoglycans in the extracellular matrix of muscle tissue in Atlantic cod (<i>Gadus morhua</i>) and Spotted wolffish (<i>Anarhichas minor</i>)

F. Trischitta, M.G. Denaro and C. Faggio	359	Cell volume regulation following hypotonic stress in the intestine of the eel, <i>Anguilla anguilla</i> , is Ca^{2+} -dependent
M.G.A. Oliveira, S.G. De Simone, L.P. Xavier and R.N.C. Guedes	369	Partial purification and characterization of digestive trypsin-like proteases from the velvet bean caterpillar, <i>Anticarsia gemmatalis</i>
R.F. Lee, A. Walker and D.J. Reish	381	Characterization of lipovitellin in eggs of the polychaete <i>Neanthes arenaceodentata</i>
C. Mizuta, K. Tanaka and T. Suzuki	387	Isolation, characterization, and cDNA-derived amino acid sequence of glycocyanine kinase from the tropical marine worm <i>Namalycastis</i> sp.
H. Nozawa, T. Mori, M. Kimura and N. Seki	395	Characterization of a transglutaminase from scallop hemocyte and identification of its intracellular substrates
J.P. Zappulla, A. Angers, D. Barbas, V.F. Castellucci and L. DesGroseillers	403	A novel actin isoform is expressed in the ovotestis of <i>Aplysia californica</i>
L. Comoglio, L. Smolko and O. Amin	411	Effects of starvation on oxygen consumption, ammonia excretion and biochemical composition of the hepatopancreas on adult males of the False Southern King crab <i>Paralomis granulosa</i> (Crustacea, Decapoda)
M.G. Sarower, S. Okada and H. Abe	417	Catalytic and structural characteristics of carp hepatopancreas D-amino acid oxidase expressed in <i>Escherichia coli</i>
J.H. Han, K.S. Lee, J. Li, I. Kim, Y.H. Je, D.H. Kim, H.D. Sohn and B.R. Jin	427	Cloning and expression of a fat body-specific chitinase cDNA from the spider, <i>Araneus ventricosus</i>
H.M.W. Økland, I.S. Stoknes, J.F. Remme, M. Kjerstad and M. Synnes	437	Proximate composition, fatty acid and lipid class composition of the muscle from deep-sea teleosts and elasmobranchs
H.J. Yuasa and T. Suzuki	445	Do molluscs possess indoleamine 2,3-dioxygenase?
B.E. Hasek and D.L. Felder	455	Biochemical composition of ovary, embryo, and hepatopancreas in the grapsoid crabs <i>Armases cinereum</i> and <i>Sesarma</i> nr. <i>reticulatum</i> (Crustacea, Decapoda)
M.H. Robinson, L.E. Twigg, S.H. Wheeler and G.R. Martin	465	Effect of the anticoagulant, pindone, on the breeding performance and survival of merino sheep, <i>Ovis aries</i>
N. Kan-no, N. Endo, S. Moriyama, E. Nagahisa and M. Sato	475	The amino acid sequence of tauropine dehydrogenase from the polychaete <i>Arabella iricolor</i>
K.-i. Nagai, K. Tadano-Aritomi, N. Iida-Tanaka, H. Yoshizawa and I. Ishizuka	487	Metabolism of sulfolipids in isolated renal tubules from rat
R.A. Scott, R.H. Wilson, W.H. Goodwin, C.N. Moran, E. Georgiades, B. Wolde and Y.P. Pitsiladis	497	Mitochondrial DNA lineages of elite Ethiopian athletes

M. Ikuzawa, K.-i. Kobayashi, S. Yasumasu and I. Iuchi

505 Expression of CCAAT/enhancer binding protein δ is closely associated with degeneration of surface mucous cells of larval stomach during the metamorphosis of *Xenopus laevis*

E.N. Miller, A.L. Rupp, M.K. Lindberg and T.J. Wiese

513 Tissue distribution of L-fucokinase in rodents

I Instructions to Authors

Vol. 140B, No. 4

General papers

E.S. Buda and T.H. Shafer

521 Expression of a serine proteinase homolog prophenoloxidase-activating factor from the blue crab, *Callinectes sapidus*

K.A. Johansen and K. Overturf

533 Sequence, conservation, and quantitative expression of rainbow trout *Myf5*

A. Kumagai and S. Hayashi

543 Participation of high-density lipoprotein in vitellogenesis in Japanese eel hepatocytes

S.J. Lee, K.S. Lee, S.R. Kim, Z.Z. Gui, Y.S. Kim, H.J. Yoon, I. Kim, P.D. Kang, H.D. Sohn and B.R. Jin

551 A novel cellulase gene from the mulberry longicorn beetle, *Apriona germari*: gene structure, expression, and enzymatic activity

V. Schein, A.L. Fernandes Chittó, R. Etges, L.C. Kucharski, A. van Wormhoudt and R.S.M. Da Silva

561 Effect of hyper or hypo-osmotic conditions on neutral amino acid uptake and oxidation in tissues of the crab *Chasmagnathus granulata*

K. Iio, M. Nakauchi, S. Yamagami, M. Tsutsumi, H. Hori, K. Naruse, H. Mitani, A. Shima and N. Suzuki

569 A novel membrane guanylyl cyclase expressed in medaka (*Oryzias latipes*) intestine

I. Kim, K.S. Lee, J.S. Hwang, M.Y. Ahn, J. Li H.D. Sohn and B.R. Jin

579 Molecular cloning and characterization of a peroxiredoxin gene from the mole cricket, *Gryllotalpa orientalis*

P.P. Magalhães, T.P. Paulino, G. Thedei Jr. and P. Ciancaglini

589 Kinetic characterization of P-type membrane ATPase from *Streptococcus mutans*

X.-J. Zhu, Z.-M. Dai, J. Liu and W.-J. Yang

599 Actin gene in prawn, *Macrobrachium rosenbergii*: characteristics and differential tissue expression during embryonic development

M. Watford and G. Wu

607 Glutamine metabolism in uricotelic species: variation in skeletal muscle glutamine synthetase, glutaminase, glutamine levels and rates of protein synthesis

N.M. Very, J.D. Kittilson, L.A. Norbeck and M.A. Sheridan

615 Isolation, characterization, and distribution of two cDNAs encoding for growth hormone receptor in rainbow trout (*Oncorhynchus mykiss*)

K. Grzyb and E.F. Skorkowski

629 Characterization of creatine kinase isoforms in herring (*Clupea harengus*) skeletal muscle

H. Bacca, A. Huvet, C. Fabioux, J.-Y. Daniel, M. Delaporte, S. Pouvreau, A. Van Wormhoudt and J. Moal

635 Molecular cloning and seasonal expression of oyster glycogen phosphorylase and glycogen synthase genes

J.F. Leatherland, L. Lin and R. Renaud 647 Effect of glutamate and somatostatin-14 on basal and cAMP-stimulated steroidogenesis by rainbow trout (*Oncorhynchus mykiss*) ovarian follicles, *in vitro*

A.K. Dasmahapatra, X. Wang and M.L. Haasch 657 Expression of Adh8 mRNA is developmentally regulated in Japanese medaka (*Oryzias latipes*)

X. Wang, B.C. Ford, C.A. Praul and R.M. Leach Jr. 665 Characterization of the non-collagenous proteins in avian cortical and medullary bone

Corrigendum

C.S. Cobb, S.C. Frankling, M.C. Thorndyke, F.B. Jensen, J.C. Rankin and J.A. Brown 673 Corrigendum to "Angiotensin I-converting enzyme-like activity in tissues from the Atlantic hagfish (*Myxine glutinosa*) and detection of immunoreactive plasma angiotensins" [Comp. Biochem. Physiol. 138B (2004) 357–364]

I Contents of Volume

VII Subject Index

XI Author Index

XIII Instructions to Authors